APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,495	12/14/2001	Cuie Zhao	3343/11046	5644

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EXAMINER
TRUONG, LECHI

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/017,495	ZHAO ET AL.
	Examiner	Art Unit	
	LeChi Truong	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 June 2005</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) <u>3-8 and 11</u> is/are allowed.

6)☒ Claim(s) <u>1-2, 9-10, 12-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5)☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____ .	6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-24 are presented for the examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claim 1, 14, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-

Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1).

3.   **As to claim 1,** Ben-Shachar teaches the invention substantially as claimed including: a

name service clusters (a service locator that maintains the name space of service instance, col 5, ln

65-67/the set of service locator, col 19, ln 51-55/ the service locator object, col 21, ln 60-65),

invoking a cluster (col 6, ln 3-5), establishing name service clusters (col 6, ln 45-46/ col 19, ln 65-

67), a unique object table (the RDBMS service, col 5, ln 65-67 to col 6, ln 1-5), object service

server reference(the name " RDBMS service"/ a service name / a set of properties for service, col

6, ln 1-10), establishing name service clusters for the object servers which each contain a unique

object binding table(col 5, ln 65-67 to col 6, ln 1-10/ col 9, ln 26-32), in response to a request from

client that invokes a cluster(col 9, ln 30-34/ col 11,ln 2-7/ col 12, ln 22-29), performing a load

balance by having name service select an object server located in the invoked cluster (col 6, ln 12-

17/ col 10, ln 62-66/ col 11, ln 3-7), a load balance (workload balancing, col 11, ln 12-18), a cluster

component to invoked cluster to provide failover upon failure of the object server(col 3, ln 34-40/

col 21, ln 60-65/ col 28, ln 35-39 and ln 54-58), a selected object reference (the service object

handles, col 6, ln 5-9/col 8, ln 63-67/ reservation context, col 26, ln 22-30/ service object , and a set

of properties for the service, col 6, ln 5-9), forwarding a selected object reference to a client upon

completion of the loading balance (col 6, ln 5-9/col 8, ln 63-67/ col 11, ln 8-15), server(server 88,

Fig. 3), the selected object reference which was forwarded to the client(col 5, ln 60-67 to col 6, ln

3-9/ col 8, ln 63-67), communicating with a server associated with the selected object reference(col

9, ln 30-34/ col 10, ln 39-42/ col 26, ln 23-30), wherein the fault tolerance, the load balance and the

failover are performed transparently(col 10, ln 3-7/ col 11, ln 60-63).

4.   Ben-Shachar does not explicit teach permitting the client to communication with the

server associated with the selected object reference which was forwarded to the clients, binding

table. However, Emens teaches permitting the client to communication with the server associated

with the selected object reference which was forwarded to the clients (sending a list of mirror

servers at the host server, said response being sent from the host to the client, response including

the list of mirror server... creating a plurality of mirror server requests at the client computer, each

mirror server request corresponding to a mirror server on the list of mirror server... sending the

plurality of mirror server requests over the network from the client computer to the corresponding

mirror server, col 4, ln 35-45/ col 3, ln 37-45), binding table(address list 36, col 8, ln 52-54).

5.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar and Emens because Emens's permitting the

client to communication with the server associated with the selected object reference which was

forwarded to the clients would improve the efficiency of Ben-Shachar's system by allowing load

balancing is accomplished without problems arise from client or name server caching.

6.   **As to claim 14,** Ben-Shachar teaches each object server reference represents a single

server (col 8, ln 66- 67 and col 9, ln 1).

7.   **As to claims 23, 24,** they area apparatus claim of claim 1; therefore, they are rejected for

the same reason as claim 1 above.

8.   Claims 2, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar

et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), applied to claim

1 above, and further in view of JR (java Reflective Broker).

9.   **As to claim 2,** Ben-Shachar and Emens do not teach port number, IP address. However,

JR teaches port number, IP address (port number, IP address, page 3 of 16, ln 9-11/page 10 of 16,

ln 20-21/ page 6 of 16, ln 14-16).

10.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar, Emens and JR because JR's port number, IP

address would improve the efficiency of Ben-Shachar and Emend's systems by allowing a client to

be able to invoke a method on a remote object.

11.   **As to claim 9,** Ben-Shachar teaches a load balance algorithm upon creation of a naming

service cluster to perform name service load balancing of object references contained within the

clusters (col 11, ln 1-6 and ln 12-17).

12.   Claims 10, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), as applied to claim 1 above, and further in view of Arno (load balancing example).

13.   As to claims 10, 12, 13, Ben-Shachar and Emens do not teach load balance based on predetermined method that is a Round robin. However, Arno teaches load balance based on predetermined method that is a Round robin (load balancing strategy like round robin, page 1, ln 27-28).

14.   It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens and Arno because Arno's load balancing strategy like round robin would improve the integrity of Ben-Shachar and Emens's systems by allowing a good tool to increase the performance of load balancing.

15.   Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1) in view of Rawson et al (US. Patent 5,675,795) and further in view of Nelson et al (US. Patent 5,452,447).

16.   As to claim 15, Ben-Shachar teaches a cluster (the set of service locator, col 19, ln 51-55/ the service locator object, col 21, ln 60-65), a context (an RDBMS service, col 5, ln 65-67), invoking a cluster (col 6, ln 3-5), performing a load balance to select an object server located in the invoked cluster (col 6, ln 12-17), establishing name service clusters (col 6, ln 45-46/ col 19, ln 65-67), a unique object table (the RDBMS service, col 5, ln 65-67 to col 6, ln 1-5), object service

server reference(the name " RDBMS service"/ a service name / a set of properties for service, col

6, ln 1-10), establishing name service clusters for the object servers which each contain a unique

object binding table(col 5, ln 65-67 to col 6, ln 1-10/ col 9, ln 26-32), in response to a request from

client that invokes a cluster(col 9, ln 30-34/ col 11,ln 2-7/ col 12, ln 22-29), performing a load

balance by having name service select an object server located in the invoked cluster (col 6, ln 12-

17/ col 10, ln 62-66/ col 11, ln 3-7), a load babance (workload balancing, col 11, ln 12-18), a

cluster component to invoked cluster to provide failover upon failure of the object server (col 3, ln

34-40/ col 21, ln 60-65/ col 28, ln 35-39 and ln 54-58), a selected object reference (the service

object handles, col 6, ln 5-9/col 8, ln 63-67/ reservation context, col 26, ln 22-30), forwarding a

selected object reference to a client upon completion of the loading balance (col 6, ln 5-9/col 8, ln

63-67/ col 11, ln 8-15), server(server 88, Fig. 3), forwarding a selected object reference to a client(

col 5, ln 60-67 to col 6, ln 3-9/ col 8, ln 63-67), communicating with a server associated with the

selected object reference(col 9, ln 30-34/ col 10, ln 39-42/ col 26, ln 23-30).

17.   Ben-Shachar does not teach table as binding table. However, Emens teaches binding

table-binding table (address list 36, col 8, ln 52-54).

18.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar and Emens because Emens's permitting the

client to communication with the server associated with the selected object reference which was

forwarded to the clients would improve the efficiency of Ben-Shachar's system by allowing load

balancing is accomplished without problems arise from client or name server caching.

19.   Ben-Shachar and Emens do not teach setting a flag to activate implicit clustering.

However, Rawson teaches a flag to activate implicit clustering (name service –a flag indicating that

the file is a name server, col 6, ln 22-25).

20.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar, Emens and Rawson because Rawson's a flag to

activate implicit clustering would improve the efficiency of Ben-Shachar and Emens's systems by

providing an improved data processing system.

21.   Ben_shachar, Emens and Rawson do not teach flag in a file. However, Nelson teaches

flag in a file (file flag, col 17, ln 25-26).

22.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar, Emens, Rawson and Nelson because Nelson's

file flag would improve the use of Ben-Sharchar, Emens and Rawson's systems by providing

results of caching operating.

23.   As to claim 16, Nelson teaches a configuration file (col 14, ln 1-10).

24.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al

(US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), in view of Rawson et

al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to claim 15,

and further in view of JR (java Reflective Broker).

25.   **As to claim 17**, Ben-Shachar, Emens, Rawson and Nelson do not teach port number, IP

address. However, JR teaches port number, IP address (port number, IP address, page 3 of 16, ln 9-

11/page 10 of 16, ln 20-21/ page 6 of 16, ln 14-16).

26.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and JR because JR's

port number, IP address would improve the flexibility of Ben-Shachar, Emens, Rawson and

Nelson's systems by allowing a client to be able to invoke a method on a remote object.

27.   Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-

Shachar et al (US. Patent 6,209,018 B1) in view of Emens(US. Patent 6,606,643 B1), in view of

Rawson et al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to

claim 15 above, and further in view of Arno (load balancing example).

28.   **As to claims 18, 19**, Ben-Shachar, Emens, Rawson and Nelson do not teach load balance

based on predetermined method that is a Round robin. However, Arno teaches load balance based

on predetermined method that is a Round robin (load balancing strategy like round robin, page 1, ln

27-28).

29.   It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and Arno because

Arno's load balancing strategy like round robin would improve the efficiency of Ben-Shachar,

Emens, Rawson, Nelson 's system by allowing a good tool for increasing the performance of load

balancing.

30.   Claims 20, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1) in view of Rawson et al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to claim 1 above, and further in view of Nessett et al (US. Patent 5,742,759).

31.   **As to claim 20,** Ben-Shachar, Emens, Rawson and Nelson do not teach object reference binding having identical names is clustered together. However, Nessett teaches object reference binding having identical names is clustered together (bind group identification to a target object, col 3, ln 15-17).

32.   It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and Nessett because Nessett's bind group identification to a target object would improve the efficiency of Ben-Sharchar, Emens, Rawson and Nelson's systems by avoiding the costly transaction costs of communicating with the server for the target object.

33.   **As to claim 21,** Ben-Shachar teaches a loading balance algorithm to perform load balancing of object references (col 11, ln 12-16).

34.   **As to claim 22,** it is apparatus claim of claim 19; therefore, it is rejected for the same reason as claim 19 above.

Allowable Subject Matter

35.   Claims 3-8, 11 are allowed.

Response to the argument

36.   Applicant's arguments filed 06/03/2005 have been considered but are moot in view of the

new ground(s) of rejection. Applicant amended the claims. Emens's reference meets the

amended claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LeChi Truong whose telephone number is (571) 272 3767. The

examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR of Public PAIP. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIP

system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

August 31, 2005

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